DNR NEWS

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DNR, Corps monitoring high hazard dams

The Department of Natural Resources and the U.S. Army Corps of Engineers have paired up this week to check privately owned high hazard dams in 20 flood-affected counties of southern Indiana.

Significant progress has been made in evaluating the dams and determining if any emergency steps need to be taken. About a dozen two-person teams have been at work in Bartholomew, Brown, Dearborn, Decatur, Franklin, Greene, Henry, Jackson, Jefferson, Jennings, Johnson, Lawrence, Madison, Monroe, Morgan, Owen, Ripley, Sullivan, Vigo and Wayne counties.

The following general information is designed to answer most questions about dams and the regulation process in Indiana.

Frequently Asked Questions:

Exactly what is a dam?

A dam is a man-made barrier constructed for the purpose of storing or diverting water. It usually is built across a stream or river and usually consists of earthen materials or concrete. Many of the existing dams in Indiana are relatively old (30 years or more), making safety inspections and regular maintenance extremely important practices.

Who is responsible for keeping a dam safe?

The Indiana General Assembly has established dam safety laws to protect the citizens of the state. Generally, the laws are intended to ensure the dam owner maintains his/her dam in a safe manner that minimizes potential safety risks downstream to lives and property. Since dam owners can be held accountable for any damage that results from the failure of their dams, they should do whatever is necessary to avoid injuring persons or property.

Who makes sure dam owners are doing what's required?

The Department of Natural Resources has the statutory authority to regulate dams in Indiana. The DNR oversees the inspections of about 1,100 dams statewide.

Are all dams the same?

No. The DNR regulates dams that meet one of three criteria – the drainage area above the dam is greater than 1 square mile; the dam embankment is greater than 20 feet high; or the dam impounds more than 100-acre feet of water.

These dams fall into three "hazard" categories – low, significant, and high. "Hazard" refers to the level of damage downstream if a dam fails. There are about 600 low hazard dams in Indiana, about 250 in the significant category, and about 250 in the high category.

What's the difference between "high" and "low" hazard?

A high hazard structure is one in which its failure may cause the loss of life and serious damage to homes, industrial and commercial buildings, public utilities, major highways, or railroads.

Failure of a significant hazard structure may damage isolated homes and highways, or cause temporary interruption of public utility services.

Failure of a low hazard structure may result in damage to farm buildings, agricultural land, or local roads.

How often are dams inspected?

State law requires a DNR inspection of low hazard dams once every five years, and once every three years for significant hazard dams. When it comes to high hazard dams, state law requires the owner of the dam to have an inspection by a licensed professional once every two years.

What happens in a dam inspection?

Actually, it's rather complex. A responsible dam safety program should include four types of inspections – formal technical inspections, maintenance inspections, informal inspections, and special inspections. A formal technical inspection is the most comprehensive and usually includes review and analysis of available data and plans, a field examination, and a final report. The field exam is performed by a team of one or more professional engineers, geologists or qualified technicians, accompanied by the dam owner or his/her representative. Depending on the type of dam, a field exam can take 2 to 3 days for a team of experts to complete and may cost the owner \$2,500 to \$4,000.

Does a dam inspection guarantee the dam is safe?

Absolutely not. An inspection is only a snapshot of the dam's relative safety status at that time while providing the owner with information on necessary repairs. Year-round vigilance by the owner using informal inspections coupled with special inspections and proper maintenance practices are far better tools for ensuring the long-term integrity of a dam.

What about levees? Are they handled the same as dams?

It depends on the type of levee. Some levees are designed and built for flood control. Others are agricultural structures not meant for the same sort of flood control but instead designed to divert water from crop fields, or to prevent topsoil erosion in the event of high water. Flood control levees are inspected. Agricultural levees are not.

So, with the recent floods, what's the status of dams in impacted areas?

Personnel from two DNR divisions – Water and Reclamation – have teamed up with U.S. Army Corps of Engineers to form two-person teams that are performing damage assessment of approximately 100 high hazard dams in 21 southern Indiana counties. It is important to note these are not dam inspections in the truest sense, but rather spot checks to evaluate visible damage and determine if there is any immediate danger.